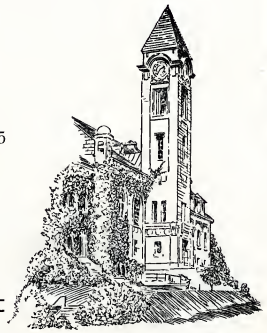
INDIANA UNIVERSITY LOOKS AHEAD

Into A Future of Increasing Responsibilities and Service

1820—
The One Hundred Twenty-Fifth Year
—1945



Indiana University News-Letter

INDIANA UNIVERSITY LOOKS AHEAD consists of a series of radio talks made by administrative officers and Faculty of the University late in 1944 over Station WHAS, Louisville.

This radio series, arranged by Professor Harry J. Skornia, director of University radio programs, was designed to present briefly the responsibilities, aims, and plans of the University for the period after the war. The attention attracted by the series has seemed to warrant its publication for distribution to alumni and friends of the University and to those interested in the postwar responsibilities and opportunities of higher education.

This publication is issued in Indiana University's 125th Anniversary year and its contents provide in effect a round-table survey of where the University stands today and of what its objectives should be in the years immediately following the war.

INDIANA UNIVERSITY NEWS-LETTER

Entered as second-class mail matter December 23, 1912, at the post office at Bloomington, Indiana, under the Act of August 24, 1912. Published twelve times a year by Indiana University, from the University Office, Bloomington, Indiana.

Vol. XXXIII, No. 2 Bloomington, Indiana February, 1945

Indiana Looks Ahead

FOR the fifth time in the last century and a quarter educational readjustment following a major period of conflict becomes the problem of those who hold that social, economic, and cultural advancement is based on teaching and training. In the immediate future this problem holds the attention in a more intense way than in any of the previous periods of postwar change.

Primarily this is true because the success of our armed forces in the active preparation and progress of the war has proved again that the trained man and woman are the ones upon whom we must depend. This emphasis on training will be carried over into the period following the war. Naturally, it will not be the intensive accelerated type.

Our colleges and universities have made such a contribution to the war effort that much time must pass before the entire story can be told. As we worked with and for the army and navy we, too, learned many lessons which will be translated into teaching programs after the war.

The returning veterans will seek the advantages of the best in education that we can give them. We cannot forecast how many men and women will take the opportunities offered but we do know that the number who will enroll in our educational institutions will be astonishing. Every estimate which I have seen has indicated that facilities for teaching will be strained to the limit. Side by side with the veteran will be the young man and young woman who have found formal education interrupted by work in industry.

From these students in the next few years must come the physicians, the lawyers, the dentists, the teachers, and the community leaders, both in city and on the farm. Practically every field of professional endeavor faces a deficit of trained men and women.

Here in the heartland of our nation, the great valley of the Middle West, we have not developed to its fullest extent our greatest natural resource. The fine minds of our boys and girls constitute a greater potential contribution to our country than all the coal and oil and products of the soil. Too few of these

young people complete their high school work. Still fewer, and it is not to our credit, go to college.

In these postwar years, our duty is plain. In addition to the necessary provision for the veteran returned from war service and to the veteran from industrial service we must see to it that our young people have the advantages that will permit them to take their place in the world that is before us. For the men and women of my generation this is perhaps the greatest contribution we may make.

The statement of the problem is simple: To provide educational advancement for the greatest possible number of boys and girls.

The solution of the problem is not so easy. It involves educational institutions, prepared for service. It means adequate financial support both from tax sources and from private sources. It means housing for students. It means laboratories, libraries, and research programs. It means farsighted administration and sympathetic instruction.

But when the problem is solved, within the structure of our unusual natural advantages, all of us will be the beneficiaries and the communities in which we live will be stronger for our efforts.

At Indiana University, as in the other great institutions of learning, plans have been made. All of the experience that has been gained in its century and a quarter of service is directed to even greater service in the immediate months and years. This service will not be a narrow offering to youth; it will enrich and intensify the lives of all with whom it comes in contact.

HERMAN B WELLS,
President.

Postwar Planning

SOON after Indiana University converted its academic program from a peacetime to a wartime basis, it became obvious that the problem of reconversion would be an even more difficult task. Fortunately President Wells early during the war realized this and appointed a Postwar Planning Committee to undertake a study and to make recommendations. This committee, which consists of Dean W. W. Wright, and Professors Ralph Cleland, Carroll L.

Christenson, Robert T. Ittner, and Francis D. Wormuth, was appointed in August of 1943 and since then has been engaged in a study of the postwar problems.

The first task which faced the committee was to find the subjects which would demand its study and attention. Among those which seemed most urgent were the following: an organization to care for the needs of returning veterans; the probable size of the postwar student body and the times and levels at which students might be expected to enter the University; the question of the size and recruitment of Faculty which would be needed to meet the expected increase in enrollment; the problem of the University calendar, that is, converting from the three-semester speed-up plan to a program more suited to peacetime needs; the extensions of University services to the people of Indiana; the possibilities of new methods of teaching, such as the use of visual aids; and special short curricula to meet the needs of mature students who might not be able or might not wish to remain for four years at the University. These were some of the most urgent problems facing the committee. One of the first tasks of the committee was to appoint a number of subcommittees to study each of these problems. Many of these subcommittees have already reported and others have almost completed their work.

It was obvious to the Postwar Planning Committee that some of the previously mentioned problems were of more immediate importance than others. Working on that assumption, the committee designated as its number one problem, an organization for returning veterans. The report on this has already been made and approved by the Board of Trustees and the Faculty. The Office of Veterans Affairs has been established and is now functioning under the directorship of Dean Wright.

The next problem for the committee is that of the University calendar. In dealing with this question, the committee is faced with two conflicting interests, namely the desire of the general student body to abandon the three-semester speed-up calendar and to return to a normal academic year, and the needs of veterans who desire and who are encouraged under the G.I. Bill to go to school during most of the year.

Another problem of immediate importance is that of preparing for an enlarged postwar student body. Available data point to a greatly increased enrollment at Indiana University after the war. The University faces a real task in finding the Faculty

which will be necessary to take care of this increase. The Postwar Planning Committee is studying this problem and will make a report in the near future.

In conclusion, a word should be said concerning increased services to the people of the state of Indiana in the postwar period. President Wells has always recognized that one of the important tasks of Indiana University is to render services to the people throughout the state. One of the tasks of the Postwar Planning Committee is to study ways and means of extending these services so that Indiana University may attain its maximum effectiveness as an institution of higher education.

FORD P. HALL,
Head of the Department of Government.

Science

FOR three years and more America has been mobilized for war. Its men have been mobilized, and from all walks of life they have marched away to camps and to battles in widely scattered parts of the world. Production has been mobilized. Plants that once made automobiles now make armament. Plants that once made pencils or toasters now make machine gun and radar parts. Knowledge and skill—science and technology—have also been mobilized; mobilized to make possible the most amazing production for war the world has ever seen; mobilized to provide our armed forces with new and efficient tools and machines of war; mobilized to meet the knowledge and skill of the enemy with greater knowledge and greater skill of our own; mobilized to focus all of our energy, all of our natural resources, all of our labor, all of our industry, all of our wealth upon the objective of bringing the war to a speedy conclusion with a victory that is complete and with a peace that is lasting.

When victory has been made certain, I believe we shall find for our postwar world two clearly defined conditions concerning the science and technology of America. First, there will be an opportunity unequaled in history for man to apply newly discovered knowledge. Before the first World War, for example, we were largely dependent upon German industries for almost all of our dyes, many of our drugs, and most of our necessary supply of

potash. Under the stimulus of necessity and the conditions existing during and following World War I, the American chemical industry developed to the extent that in 1940 it was producing all the dyes and drugs that we and our allies required and was not only meeting domestic potash requirements but was providing potash to others. Following World War II we may expect similar developments in other fields of science and technology. During the war research has been speeded up, and the probable results of twenty-five normal years have been condensed into two or three. It remains for us in peacetime to apply this knowledge in providing for all of our people more adequately and more richly the necessities of life and at least some of those things that add to the happiness and comfort of living.

Secondly, it appears quite clear than science and technology in postwar America will suffer because of lack of manpower. Four years, and in many cases at least seven years, are required to train the engineer, the chemist, the physicist, the geologist, the doctor of medicine, or almost any other man or woman for scientific work. During the war it has been necessary to curtail training until at the present time one can say that the potential supply of newly trained professional and technical personnel for the next few years represents an almost negligible number of persons in comparison to the normal number absorbed each year by industry and in research and teaching before the war. Because of the length of time required to train a scientist it will necessarily be three or four years after the war is over before the number of newly trained persons will be anything like the normal number or the number required. To meet this need we must look to the colleges and universities because it is there that the scientist, the technologist, the engineer, the doctor, and the dentist are trained. The colleges and universities accept this responsibility. They are not discouraged and to the young man and young woman who is interested in science as a career they have this message, "Never in the history of our country has the need for first-rate scientists been greater or your opportunity more promising."

HERMAN T. BRISCOE,
Dean of the Faculties.

Veterans Affairs

NEARLY 9,000 former students and alumni of Indiana University have entered the armed services. At least one-third of those were students when they entered the service. More than 1,600 men and women who would have attended Indiana University if it hadn't been for the war have had their college days delayed.

The University realized that there were many problems that would need special attention when these ex-service men and women came or returned to the campus after the war. To meet these problems of the returning veteran there was created, in the University, in March, 1944, the Office of Veterans Affairs with a director, appointed by the president, and a board of control made up of members of the Faculty. This group has been formulating policies and procedures in relation to returning ex-service students in matters of evaluation and transfer of credits from other institutions, credits for military service itself, for special training received in military service, etc. The Office of Veterans Affairs furnishes guidance to the returning student to help him work out a satisfactory educational program. This applies both to those who wish to complete their work toward a degree in the various schools of the University and to those who wish to take special programs not leading to a degree. The office will act as a liaison between the student and government agencies. Perhaps its most important function will be to serve as an office of information.

In all departments of the University there are already enrolled some 320 ex-service men and women. Primarily these men and women are medical dischargees. How well are these men and women adjusting themselves to college life after the rigors of army training and days and nights in the fox-holes on the front? To answer that question we have some facts and several impressions. Fifty of these ex-service students were enrolled in 1944 summer semester. We compared their academic grades with those of their non-service classmates. We found that, as a group, these ex-service students did 5 per cent better than other students. We can say, at least, that they are doing as well academically as the other students, and generally better. From many hours of conversation with these ex-service students and numerous observations we find that, on the whole, they are adjusting themselves well to the life

of the University. They do find it difficult to settle down to school work again. Long hours with their nose in a book is at first a difficult adjustment for them to make. They are very serious-minded. They are anxious to get their training completed and will, in the main, desire to go to school the year around.

An unprecedented opportunity for education is now available for ex-service men and women through the enactment, by Congress, of Public Law 346, popularly known as the G.I. Bill. The essential features of the educational section of the law are:

1. Eligibility. Any veteran of World War II, with ninety days or more of active service and with an honorable discharge, is entitled to its benefits.

2. Benefits. These benefits are listed with regard to: (*a*) Time—An individual can receive training for one calendar year plus the time in active service. For example, a person with two years of active service would be eligible for one calendar year plus the equivalent of two years in active service, which would mean three calendar years or thirty-six months of schooling. (*b*) Subsistence—During this period of time the veteran would receive, if single with no dependents, $50 a month for subsistence. If he is married, or has one or more dependents, he receives $75 a month. (*c*) Other benefits—In addition to subsistence, there are also provided his tuition, fees, and necessary books and supplies.

3. Place and type of training. The veteran may take his educational training at any approved educational institution and in any field of his choice provided he is accepted by that institution.

Perhaps millions who have served their country in the armed forces will take advantage of this educational opportunity—an opportunity to increase their training to be better fitted to meet the problems of the postwar world. Indiana University expects thousands of these veterans in its various branches—on the Bloomington campus, the Indianapolis campus, and its five Extension Centers. It is our hope that we shall not fall short in meeting our obligations to these men and women who have fought that we might have an even better Indiana University.

WENDELL W. WRIGHT,
Director, Office of
Veterans Affairs.

Physics

WITH its possibilities as a factor in the future treatment of such a dread disease as cancer, as well as leukemia, the cyclotron naturally ranks high among the marvels of physics. With the cyclotron the physicist adds parts to the atom and takes away parts. He changes one atom into another with different chemical and physical properties. These artificially produced chemical elements are a new tool in the hands of all branches of science, and their effect upon the future course of scientific development is beyond the range of prophecy.

Standing near the cyclotron in recent physical marvels is the electron microscope which permits magnification fifty times greater than is possible with the most powerful optical instruments. This microscope has revealed to man for the first time that common colds are caused by a virus, an organism more minute than the smallest bacteria ever observed by any other process.

Other marvels of physics in recent years are: television, in advanced stages of development; radar, an almost superhuman aid to the military forces in detecting and locating enemy craft; the 200-inch astronomical telescope now being constructed in southern California; cosmic rays coming in from space, possibly announcing events which man has never observed; refinements in the airplane and radio; and others, many of which are still concealed under the cloak of military secrecy.

Without any reference to the divine, we often speak of these things as miraculous, perhaps because they are so recent. However, literature shows that radio-activity, X-rays, and the telephone were considered equally miraculous in the days of their discovery and development. Before them were the telegraph, railway, steamship, microscope, telescope, electricity, magnetism, and other marvelous developments and discoveries without end.

In looking ahead, all of us are wondering how long the list of miraculous discoveries in physics will continue to grow.

The unanimous feeling of physicists on the Indiana campus is that the opportunity for physical research was never so promising, and that, with a sufficient number of competent workers in the field, the harvest will continue to grow more and more abundant.

Upon this conviction, and with its eyes turned sharply into the future, Indiana University is increasing its facilities to participate in the training of tomorrow's physicists. The University's cyclotron, its spectrographs, cloud chambers, delicate electrical meters, and many other items of research equipment are being readied to give future graduate students practical, firsthand experience in the investigation of physical problems in the pioneer fields of electronics, and atomic and nuclear structure, as well as in the classical phases of the subject, with the hope that their hands may contribute a fair share of the future miracles of physics. The University's undergraduate physics laboratories and classrooms are being equipped with additional apparatus, and new courses are being added so that the ground work of the future miracle-makers may be substantial and complete, and so that an army of teachers may be trained for the generation of a livelier general interest in the subject.

Today Indiana offers her facilities to the men and women who would add to the marvels of the past and become the miracle-makers of tomorrow.

CHARLES HIRE,
Acting Head of the
Department of Physics.

Chemistry

THE nature of World War II has demanded help from all branches of science. The chemists have done their share. Through the excellent cooperation of chemical specialists in thirty different fields the development and production of 870,000 tons of synthetic rubber, tons of special explosives, drugs such as atebrin, penicillin, plastics for aeroplanes and plywood gliders, and special alloys for armament, electrical equipment, and rocket planes—all these and many more have been produced.

The impression is generally given that these new products are the result of short-time, high-powered research, completed in two or three years. Nothing could be farther from the truth. These wartime emergency developments were actually dependent on, and would have been impossible without, the knowledge accumulated over many years in a large number of fields.

The chemist deals with atoms and molecules. The way in which the atoms are combined into molecules determines the

property of substances. If one wishes to make an elastic substance like rubber, it is necessary to find out how the atoms are combined, the nature of the combinations, and how many of the units must be stuck together. Studies with ozone, ultracentrifuges, spectrophotometers, all these and many more, contributed their part toward the production of synthetic elastomers—so good that they are better than nature's own product. The point to be emphasized is that these recent war developments are merely an emergency diversion of thousands of peacetime investigations. The purpose of these investigations was not for war—but for peacetime use. Many of these studies were merely inspired by intellectual curiosity and their purpose was to add to our knowledge and raise our standard of living.

Since 1939 the number of new inventions and of new fundamental discoveries has markedly dropped because chemists have been so busy applying old information that they have not had time to investigate new projects.

It is clear that all of the new developments call for clear thinking on the part of carefully trained chemists in many different fields. It is the function of the teaching staff in the Department of Chemistry at Indiana University to provide proper instruction in the fundamental fields of chemistry, both for undergraduate and graduate students. It seems very probable that chemical research and application will develop to an even greater extent following the close of World War II than it did following the close of World War I. The opportunity is here both for new students and for returning veterans.

RALPH L. SHRINER,
Chairman of the Department of Chemistry.

Business

WHEN the enemy hit America in 1941 America went to work and performed a production miracle.

And our armed forces who are conquering Europe and Japan bear witness to this production miracle in the endless miles of tanks, the long railroad trains of guns, the flying fields carved out of every corner to hold the overflow of planes.

Yes, these men know our country has found again the strength that made us great; has found again, in this mighty power to destroy, the power to create.

And they see how this miracle, this mighty power, this energy used now for war, can, after victory, create a new and finer life than we have ever known before.

New cities, new farms, new homes, new industries, new opportunities for returning heroes and every man, opportunities to plan and work and grow, to build a new and greater America.

That's the way they want it to be.

That's the way it's *got* to be!

National production, postwar, must be at the rate of at least 140 billion dollars a year—at least 40 per cent more than the 1940 output of goods and services, and within shouting distance of the present astronomical wartime output, which includes hundreds of billions' worth of war materials for which the government is the customer.

Looked at in such terms, tomorrow's production job will be no cinch.

It's a big undertaking, but there are many factors that will augur well for success in it.

For instance, on the postwar want list of Mr. and Mrs. America we find: two and a half million automobiles, nearly two million mechanical refrigerators, three quarters of a million dining-room sets, more than a million new vacuum cleaners, one and a quarter million new washing machines, six billion dollars for new homes.

A few years of war have brought progress in science, invention, and technology which otherwise might have required a quarter-century or more. Aviation, electronics, plastics, chemicals, light metals—these barely suggest the endless possibilities of new markets at home. And beyond, waiting exploration, are other possibilities of expanding foreign markets.

Barring the disaster of price inflation, Mr. and Mrs. America will have stored up vastly more buying power than they have ever had before with which to satisfy their wants.

To realize this production miracle we will need a distribution miracle.

The great pent-up postwar demand for goods and services will stay pent up unless it is released by the full use of the particularly

effective switch-throwers—advertising and selling. Mass production depends upon mass consumption. Mass selling creates mass consumption. Take mass selling out of the picture and mass production would serve only to fill warehouse space.

Little do most people realize that distribution is inextricably bound up with that miracle called the American standard of living, bleakly, but forcefully, expressed by the presence in every 100 American homes of 89 radios, 79 passenger cars, 68 bathtubs, 40 telephones, all of which were not brought into use by spontaneous demand!

At the end of the war—which has made distribution a government problem—it is estimated that no less than 50 per cent of the salesmen formerly employed will have to be replaced. In many war plants, an entirely new sales organization will have to be developed.

While distribution methods in general will not change much in the postwar era, it is reasonable to assume that the sales task ahead of distribution managements will call for tremendously greater effort. Accordingly, the quantity and quality of distribution personnel will have to be larger and better.

It is our belief that colleges and universities can aid business enterprises whose sales organizations have been depleted and which have to rebuild a marketing staff from scratch.

A man who wants to be a lawyer, a doctor, or an engineer has the choice of numerous institutions that will prepare him for his profession; up to 1920 a student who wanted to train for a business career had few institutions worthy of the name.

To help lift the level of business as a profession, Indiana University employed the formula that raised the levels of medicine, law, dentistry. In 1920 they established a school of commerce so that college-minded high school youth possessing a vocational interest in business would have a place to go for university training, and youth not sure of the field they wanted to enter as a life work could be exposed to the opportunities of a career in business.

The increasing extent to which business executives and government officials look to Indiana University for young persons trained in the various fields of business is evidenced by the fact that the School of Business has been enlarged three times since its establishment in 1920. The present building, opened in 1940, is considered one of the best equipped in the country. Curricula

include accounting, transportation, finance, management, public administration, advertising, selling, and retailing.

Internships in accounting, selling, and retailing are available to students who desire to engage in practical work in their chosen fields of endeavor while they are attending the University. These internships are conducted in cooperation with business organizations. Indiana business leaders serve as School of Business Faculty associates and provide a steering and advisory committee for Faculty and students.

The greatest opportunities always exist where there are the greatest number of future problems to be solved. Surely no one can deny that distribution is now, and will be to a vastly increased degree after the war, a field teeming with problems. Therein lies the marketing man's opportunity for the future.

Men with small ambitions need not apply for tomorrow's distribution jobs; there will be no room for pygmies. Tomorrow, distribution will need mental giants.

BROOKS SMEETON,
Assistant Professor of Marketing.

Education

A true education, we believe, holds a key position in establishing the future happiness, security, and general welfare of any people.

As Indiana University looks ahead she willingly accepts her share of responsibility in meeting the problems of youth in the field of education.

The problems are varied and numerous; some of them are immediate; some will come suddenly at the end of the war; others will develop gradually in the postwar period. We shall seek to meet all of them as adequately and with as great dispatch as possible.

We realize that in meeting these tasks we shall need an expanding vision and an expanding program. We must appreciate and hold fast to the fundamental verities. But there is a definite challenge to go beyond the present educational concept and procedure to find new truth and to work out a pattern for new and

better things. We must seek to profit by war experiences which have shown both weaknesses and strengths in our educational program; but we shall need to keep an even keel in the midst of insistent demands for departures into the fields of new courses, new methods of teaching, new policies and programs, and even new educational goals.

Some of the above demands will prove reasonable and practical. They should be and will be met.

An immediate task, increasingly important, and already impending is that of meeting the needs of returning veterans. Whatever the needs and whatever the cost, this group must have special attention and be adequately provided for, in partial compensation for the sacrifices they have made.

Immediately after the war also, the University will face a twofold problem with other groups: First, that of handling students whose normal course in education has not been interrupted; and, second, that of taking care of the large numbers whose school career has been broken into and who will have to take up their educational work anew. There will therefore be need for rapid extension of educational facilities and personnel to provide for a predicted large increase in attendance on the campus and for a continuous state-wide adult educational program. Also, because of a serious shortage of public school teachers in numerous fields, it will be necessary to expand the teacher-training program both in number and types of courses and in the number of centers where the training may be given.

One of our more fundamental problems is the enlargement of our concept of education. Not just any kind of education will do. We need an education which will develop all the individual's capacities and integrate all his activities; an education which will integrate also all social activities; for true education is a force which furnishes the light and the leadership both to see and to improve social conditions. In turn the improved, advanced social conditions form a new level and new springboard from which leadership may again advance society to better things. This cycle continues through the generations and demonstrates the lifting cultural power of a sound education.

In education, as in industry, we shall have to face the problem of conversion. Perhaps in some cases we may need to convert from factory methods tendencies, and from a trend to bring off our assembly lines regimented automatons—to the more intensive and

individualized development of independent, thinking, moral personalities. We need citizens who are not morally neutral, not coldly scientific, but who are concerned about moral principles and their practical applications: citizens who are not merely intellectual but whose emotional experience and training are sufficient to give added insight into human needs. It will be the increasing duty of higher institutions of learning to assume a greater responsibility for the development of forceful, morally-sound citizens because many other institutions are exercising a decreasing influence in this field. Here education must recognize its responsibility to provide continuous lifelong assistance. To the carrying out of this task the University will need to dedicate all its institutional wisdom, its energy, and its creative imagination.

Our experiences in global war are forcing us to extend our intellectual horizons to see the broader implications and results of education; to see that in building a worthy individual life or a worthy national life, the surest foundation is a sound education. Every individual, every group, every nation is definitely affected by the amount and character of education prevailing. In this connection the most critical and difficult problem of this generation is the development and maintenance of a peaceful cooperative relationship among nations.

The solution of the problem lies, *first,* in the developing of a fuller understanding of our own personalities, and of the personalities of other people, together with a right attitude towards ourselves and good will towards others; and, *second,* in coming to realize that a genuine loyalty to the smaller social group does not preclude but rather enhances a true loyalty to the larger group; in short, that we can have both a true nationalism and a sound internationalism just as we can at one and the same time have a family pride and a deep community interest.

In a democracy education is especially essential because all the people must help to determine all social policies. Peace or war, prosperity or depression, freedom or regimentation, depend upon the power of ideas in the minds of the total population. If we want the best in national life we shall have to teach the best in ideas, in ideals, and in practice in all our public schools and higher institutions of learning.

A further task to be faced is that of enhancing education in the eyes of youth and of raising it to new prestige levels. A real education gives the light by which to go forward and the spiritual

strength by which to hold fast. It is the knowledge of the way and the wisdom to walk in that way. Some day we shall learn that a sound education is as essential as food and clothing and shelter; that the cost of ignorance is far higher than the cost of education; that the ignorant, untrained, and unmotivated man is doomed to take the low road that leads to low values, while the educated, trained, and inspired man may take the high road to freedom and richness of attainment.

Indiana is going forward in the conviction that with clear vision, proper procedures, wholesome incentives, and a truly co-operative spirit it is not only possible to reach higher goals but that greater achievements are thus assured.

HENRY L. SMITH,
Dean of the School of Education.

Medicine

MEDICAL training at Indiana University is in effect a 100 per cent war effort. With only minor exceptions, all activities centering in and about the School of Medicine are direct contributions to the winning of the war.

The School of Medicine and its affiliated divisions on the University's Indianapolis campus are providing training for 298 medical students, 311 nurses, 25 dietitians, and 13 medical technologists. Practically all of these students on completion of their training will enter the armed forces where their services are greatly needed.

The three hospitals of the Medical Center—James Whitcomb Riley Memorial Hospital for Children, the Robert W. Long Hospital, and the William H. Coleman Hospital—in 1944 cared for 10,739 patients with a total of 193,536 hospital days. The Center cared for 35,309 out-patient calls during the same period. The care of these patients, an indispensable part of the training of medical students, nurses, dietitians, and medical technologists, is a direct and important contribution to the war effort because of the great shortage of physicians in civil practice.

The School of Medicine, despite the loss of seventy of its Faculty, or practically every man under fifty years of age, to the armed forces, has furnished assistance to the State Board of

Health, the Indianapolis City Hospital, the American Red Cross, and the law-enforcing agencies of the state.

The war which has given the School of Medicine and its hospitals these great responsibilities has brought, in the same manner, heavy burdens. Shortages of both manpower and materials have been keenly felt. However, the School has thrived on adversity. It loyal Faculty has put forth unremitting effort; its students, aware of the trust imposed in them, have worked harder; and altogether the standards of instruction and of academic endeavor have not only been maintained but have gone forward on higher levels.

The School of Medicine, while striving to perform its wartime duty, is giving thought to the days of peace. To that end, Faculty committees have been studying these postwar problems: improvements in educational and administrative procedure; new building needs; research; postgraduate study; proposed school or department of public health; special services of the Riley Hospital; and plans for expanded instruction for nurses, dietitians, medical technicians, X-ray technicians, and physical and occupational therapists.

Postwar instruction and refresher courses will be required by hundreds of the School's graduates and other physicians now in the armed services. It will be the School's task to provide these courses and thus enable service physicians to reconvert to peacetime practice.

Public health seems destined to have a large part in the thinking of our people after the war and there will be great need for physicians trained in public health and industrial medicine. The School of Medicine looks forward to the opportunity of cooperating in the establishment of a department, and eventually a school, of public health.

Despite the burdens of war, medical research through the Indiana University School of Medicine has gone forward. The returning staff members and hoped-for addition to facilities will enable the School after the war to devote much greater attention to research. Problems already designated for research attention include these:

Investigations of outbreaks of food poisoning and diarrheal diseases;

Study of mental disorders—a field of research which should enable many veterans of the war to assume positions of usefulness;

More accurate diagnosis of tuberculosis and more effective methods of combating its causative bacterial organism, and,

Parasitic diseases common to residents of Indiana.

Other medical research needs urgently to be undertaken. This is especially true of research in the diseases which afflict middle-aged and elderly persons, such as cancer, heart diseases, arterial diseases (including heart diseases and diseases of the kidneys and brain), enlarged prostate, arthritis, and diseases of the eye. Another important field of study concerns the nature of the bacteriologic infections in infants and children, particularly of infections of the respiratory tract.

The medical profession "looks ahead" and the Indiana University School of Medicine confidently expects to maintain a position of leadership to the end that the people of Indiana shall enjoy a greater measure of health as well as a greater degree of happiness and prosperity.

WILLIS D. GATCH,
Dean of the School of Medicine.

Dentistry

INDIANA University and its Dental School are looking ahead through the eyes of research to yet undiscovered ways to better general health and happiness through better dental health. New truths are being learned which will lead to methods of improving the preventive, surgical, and restorative fields in dentistry.

Dental decay is the most prevalent disease afflicting mankind, and few adults escape it. The widespread prevalence of dental ills is shown by the fact that at the installation of the Selective Service System, one out of every five men rejected for physical reasons was rejected because of dental defects. The condition of the teeth of young men entering the armed forces has brought to our attention very forcibly the shocking statistics of dental conditions.

Carefully prepared data from recent studies on the prevalence of dental decay in the student body at the University of Minnesota indicate that decay has increased about 7 per cent in the past ten years. This was true in spite of the fact that the general health

picture of the student body had improved. Studies made at Indiana University in the student body indicate that the prevalence of decay is the same as at Minnesota.

Indiana University is keenly aware of the hazards to the general well-being and health of the people of this state resulting from dental disease. Its Dental School ranks with the best schools of America in training young men to enter the practice of dentistry and wage war against the ravages of dental decay. But even more important than the training of skillful dentists, Indiana University recognizes the value of the prevention of dental decay. Toward this end, the Dental School has made it attractive for scientists to conduct research, hoping to develop methods whereby decay could be greatly reduced.

As an example, we are now prepared to announce a program which has been shown to control approximately three-fourths of dental decay. This is done by requiring the patient at any age to follow a prescribed diet designed to eliminate certain bacteria which are in the mouth when teeth are decaying. Once these bacteria are eliminated, the teeth will stop decaying.

This sounds much easier than it really is, however, because for each patient the number of bacteria in the mouth must be determined, and he must then go on a sugar-free diet for a period of approximately two weeks, and a modified diet thereafter. It is not always easy to get full cooperation from patients in using a diet where sugar is missing, and consequently it is difficult to control decay by this means. It is a well-known fact that dental decay is most active in children and young adults. The recommended diets not only are designed to reduce the activity of the bacteria causing tooth decay, but also are planned to supply all of those food factors necessary for the well-being and good growth of the individual. Anyone may take advantage of this program by arrangement with his local dentist or by applying directly to the School of Dentistry.

Two years ago, Indiana University looked forward eagerly to the day when it could offer to the children of Indiana more hope against the hazards to their health and disfigurement to their appearance resulting from tooth decay. But, today, Indiana University looks forward to more easily applied methods which will be even more effective. It now appears that these hopes may become a reality. More research and more time will be required, however, to verify our early encouraging results.

Though decay is responsible for the loss of most missing teeth, there is another disease which is responsible for the loss of almost as many. This dental condition is known to many people as pyorrhea and is actually an infected condition of the tissues which support the teeth. Disease of the supporting tissues of the teeth is responsible for the loss of nearly half of all the teeth extracted. This disease occurs in many degrees of severity. It may be very mild. Under such circumstances it is called gingivitis.

Pyorrhea, and the subsequent loss of teeth from it, is usually the result of poor mouth hygiene. It must be remembered that many varieties of bacteria are always present in the mouth just waiting, it seems, for the resistance of the body to get low enough for them to infect the tissues. Therefore, any disease such as anemia or diabetes, or dietary deficiencies, or any of a large number of other conditions which lower the general resistance of the body, may be causes of pyorrhea.

To combat this disease as well as decay, Indiana University looks ahead through the eyes of research to learn undiscovered ways to better health. Well-qualified scientists, fired with the enthusiasm to learn what lies beyond the horizon, are blazing new trails into the unknown and are making new discoveries in the preventive, surgical, and restorative fields in dentistry. Indiana University looks impatiently forward to the day when the sons and daughters of this state can be provided, through science and adequate dental care, with the best dental mechanisms to be found anywhere.

WILLIAM H. CRAWFORD,
Dean of the School of Dentistry.

Public Health

IF this nation is to go forward as a vigorous people paying the war debt and rebuilding a war-torn world, it must be a healthy, well-nourished nation. It is not to be supposed that a sickly people can clean the Augean stables which are the aftermath of war, starvation, and desolation. Our returning service men will demand for their homes and their families some measure of the sanitation and care which has made it possible for them to remain alive, well, and vigorous even in the midst of terrible health hazards.

Indiana has been parsimonious in its support of health agencies. We are one of the few states among the eastern states which still uses part-time health officers; we spend far less money on our health departments than do most states; our death rate is definitely above that of the United States as a whole. Even more to the point, it is above that of the surrounding states. We are embarrassed to say these things, but they are true. Only those persons who have done nothing about these facts need feel ashamed. Those who have fought hard for the healthful way of living can hold their heads high even though they wish the story were different.

The future must be better. We have done well in lowering our death rate here in the Hoosier state, but we have not done well enough. We must do better from now on. Such being the case, as a representative of the State Board of Health, I am proposing a six-point program for the consideration of the people in this momentous year, 1944.

1. We should increase state and local appropriations for health. It is said that the war this year will cost $98,000,000,000. Indiana's proportionate share would be about $3,500,000,000. Now one-tenth of one per cent of this sum would be $3,500,000. In other words, one year of killing and destruction will cost Indiana as much as one thousand years of health administration with its saving of life and health. Does that seem extravagant? It is only one dollar for every man, woman, and child. Health is a purchasable commodity to a very large extent. It is our most valuable asset. We must buy all of it that can be had. It is a bargain.

2. The health laws of Indiana have been slowly collected over a period of seventy years; these laws are often obsolete, often contradictory, frequently ridiculous, and always hard to find in the law books. A commission should be appointed to study, rewrite, and codify all the health laws and have such a code ready for the legislature of 1947 to pass. This will require an act of the legislature of 1945 to set up such a commission. Immediate action is of the utmost importance to the health program of Indiana.

3. The State Board of Health is in much need of reorganization. As it now operates, it is essentially (except for size) as it was fifty years ago when there were but two full-time employees. This reorganization should be worked out in harmony with the health code mentioned earlier so that it may implement that code.

It will be impossible to get the best results from our health board until this is done.

4. The part-time health officers of the state should be replaced by full-time health officers, physicians especially trained for health work, just as soon as such a number of health officers can be found or trained. The work of the health officer is just as much of a medical specialty as ophthalmology, surgery, or obstetrics. The part-time health officer is paid so little that he can do no more than scratch the surface of the work which so badly needs doing. Every county or group of counties which has a full-time health officer should also have a nursing supervisor with a corps of public health, school, and maternity nurses, a sanitarian, and possibly a health educator if the county or district is large enough to support a staff of such size. Except for supervision at a state level, this health officer should be under local control, which means of course that he should be paid from local funds.

5. Each such health unit should have a health office. Preferably such an office should be new, clean, planned for the purpose, and a source of community pride. Such an office for a county of medium size could be built for $30,000, which is the cost of one mile of concrete road. Surely such an office would equal in value to the community a mile of road! Larger units would, of course, require larger quarters, but rarely would the cost need to be over $50,000. In addition, the State Board of Health at Indianapolis needs another building for housing its laboratories and offering adequate fire protection for its 5,000,000 birth and death records which are utterly irreplaceable and extremely valuable to the people of the state. This building, well equipped, would cost about $500,000, or 10 cents for each birth and death certificate, to say nothing of the other uses of the building.

6. The Indiana University Medical Center at Indianapolis offers exceptional facilities for the health training of physicians, dentists, nurses, technicians, sanitarians, dietitians, and health educators. There should be developed a School of Public Health as a part of the University. This enterprise can succeed only if the other projects here mentioned are carried out. Such a school would serve as a most valuable stimulus to the whole program in Indiana. We understand that the University is eager to go ahead with this project if there is promise of effective action on the other points of the program.

People of Indiana, parents, teachers, physicians, dentists, nurses, citizens—here is a program which should make for better health in

our fair state. This program is vital; it must not be made the tool or plaything of partisan politics; it must not fail.

We present it for the consideration of the public. Indiana is behind in such matters. Most states have full-time health officers and much larger budgets than Indiana. Most states have lower death rates than Indiana. We cannot afford anything but the best in this respect. And we believe the people and the legislature of Indiana will demand the best.

THURMAN B. RICE,
Chairman of the Department of Bacteriology and Public Health.

Expansion

AFTER the Ohio river completes its short journey within the state of Pennsylvania it becomes a part of the boundaries of five great commonwealths: West Virginia, Ohio, Kentucky, Indiana, and Illinois. The valley of this tremendous river includes nearly all of the 200,000 square miles contained in these five states. More than 23 million people reside in the Ohio Valley.

Industrially it has grown far beyond the ideas of the agriculturally-minded pioneers who followed the river into the promised land west of the mountains. In these war years the products of the factories and farms within the Ohio Valley have been the capstone of the war effort.

This tremendous ability to produce must also be the goal for the years following the war. The Ohio Valley, it is believed, will be the center of the peacetime advance within the nation.

Accompanying articles in this booklet have indicated some of the problems in education which will arise from that leadership and some of the solutions of those problems which are already being planned by Indiana University and its sister institutions. Men competent in the various fields of education have pointed out the great responsibility which rests upon higher education to be ready to provide trained leadership in economy and in culture in peace as it had in the arts of war.

At Indiana University the reconversion to peacetime activity will not be a new experience. Five times since its founding in 1820

Indiana University has been an educational factor in a nation at war. Each time the University has emerged in a stronger position of leadership, with a broader program, and alert to the newer methods of teaching.

As with the other great colleges and universities of the Ohio Valley, Indiana University will be ready to accomplish all that is demanded. Its only limitation will be the scope of the facilities available. And the facilities for teaching, for training, and for research cost money.

It is easy to say of the great state universities such as Kentucky, West Virginia, Ohio, Illinois, and Indiana that, since they are supported by tax money their financial position is secure and that all problems of money are solved. Fine as is their support from taxation, that support supplies only a portion of the needs of these universities; to some it is only the basic source of income.

Each of these universities has been fortunate in that persons interested in education and the upbuilding of the area in which they live and in which their children will live have added physical equipment, scholarships, fellowships, and endowments through gifts so that these great schools may be even greater.

Likewise some of the industries of the Ohio Valley have provided the ways and means that these institutions might further research and investigation. These industries have provided equipment and money.

Great art treasures and valuable historical collections have come to these universities by gifts and by bequests from friends. The stability and permanence of these state institutions have attracted the finest sort of cooperation from literally thousands of men and women who believe in education and emphasize that belief with financial support.

At Indiana University such support from sources other than taxes is encouraged and administered by the Indiana University Foundation. The Foundation is a corporate body associated with the University and administered by a board of directors that includes some of the outstanding professional and industrial leaders of the country. These men, generous with their time, each year ask the University what project is most desirable and what project is least likely to be provided from other sources. The answer becomes the program of the Foundation for the year. Just now the emphasis is on scholarships so that more and more boys and

girls of outstanding promise may be aided financially in their college work.

In all years the Foundation works toward the end that the library facilities of the University may be constantly improved; that funds be available for lectureships so that world leaders may be brought in contact with each generation of students; that the needs of the University may be made known and that constant effort be made to fulfill those needs.

Only by joint support between the state with tax funds on one hand and the friends of the University with gifts and bequests on the other can the needs be met. Here in the Ohio Valley we have a great opportunity; here, too, we have the men and women of vision who will, through support of our educational institutions, crown that opportunity with realization.

LAWRENCE WHEELER,
Executive Director,
Indiana University Foundation.

Scanned from the National Association of Educational Broadcasters Records
at the Wisconsin Historical Society as part of
"Unlocking the Airwaves: Revitalizing an Early Public and Educational Radio Collection."

A collaboration among the Maryland Institute for Technology in the Humanities,
University of Wisconsin-Madison Department of Communication Arts,
and Wisconsin Historical Society.

Supported by a Humanities Collections and Reference Resources grant from
the National Endowment for the Humanities

MITH MARYLAND INSTITUTE FOR TECHNOLOGY IN THE HUMANITIES

UNIVERSITY OF MARYLAND

WISCONSIN HISTORICAL SOCIETY

WISCONSIN UNIVERSITY OF WISCONSIN–MADISON

NATIONAL ENDOWMENT FOR THE Humanities

Any views, findings, conclusions, or recommendations expressed in this publication/collection do not necessarily reflect those of the National Endowment for the Humanities.